

# MATERIAL SAFETY DATA SHEET

## Prostaglandin D2-1-glyceryl ester

Page: 1

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### 1. Product and Company Identification

**Product Code:** 12015  
**Product Name:** Prostaglandin D2-1-glyceryl ester  
**Manufacturer Information**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** Cayman Chemical Company (800)364-9897  
**Information:** Cayman Chemical Company (734)971-3335  
**Chemical Family:** Prostaglandins  
**CAS Number:** 309260-52-4  
**Synonyms:** 9.alpha.,15S-dihydroxy-11-oxo-prosta-5Z,13E-dien-1-oic, 1-glyceryl ester; PGD2-1-glyceryl ester

### 2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TLV	Other Limits
1. Prostaglandin D2-1-glyceryl ester	309260-52-4	1.0 %	No data.	No data.	No data.
2. Acetonitrile	75-05-8	99.0 %	8H TWA:40ppm (70 mg/m3)	TWA: 20 ppm	No data.

  

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Prostaglandin D2-1-glyceryl ester	NA	No data.	No data.	No data.	No data.
2. Acetonitrile	AL7700000	No data.	No data.	No data.	No data.

### 3. Hazards Identification

**Emergency Overview:** No data available.  
**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection  
**Potential Health Effects (Acute and Chronic):** The hazards identified with this product are those associated with the solvent(s).  
Can cause fatal cyanide poisoning.  
Material is irritating to the mucous membranes and upper respiratory tract.  
May be fatal if swallowed, inhaled, or absorbed through skin.  
May cause eye, skin, or respiratory system irritation.  
Several hours may elapse from exposure to onset of symptoms.  
The toxicological properties of this compound have not been fully evaluated.  
**Signs and Symptoms Of Exposure:** Effects of overexposure may be delayed.  
High concentrations may produce flushing, headache, nausea, vomiting, respiratory depression, weakness, blood changes, thyroid changes, irregular heart beat, abdominal pain, suffocation, convulsions, shock, unconsciousness and death.  
Irritating to the skin, eyes, nose, throat, and respiratory tract.  
Long term exposures may affect liver, kidneys and central nervous system.  
Reddening of the eyes and pupil dilation are symptoms of cyanide poisoning. Blue discoloration of the skin, Cyanosis, tends to be associated with severe cyanide poisonings.  
**Medical Conditions Generally Aggravated By Exposure:** Those with history of central nervous system, heart or lung diseases, or liver, kidney, or thyroid problems may be more susceptible to the effects of this substance.

### 4. First Aid Measures

**Emergency and First Aid Procedures:** If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.  
Do not give direct mouth-to-mouth if victim ingested or inhaled this substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.  
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed

# MATERIAL SAFETY DATA SHEET

## Prostaglandin D2-1-glyceryl ester

Page: 2  
Printed: 01/31/2005  
Revision: 01/31/2005

to do so by medical personnel.  
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.  
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**Note to Physician:** Acetonitrile is metabolized to cyanide. Patients with significant exposures must be observed for signs of cyanide poisoning and treated accordingly.

### 5. Fire Fighting Measures

**Flash Pt:** 2.00 C Method Used: CC  
**Explosive Limits:** LEL: 4.4% at 25.0 C UEL: 16% at 25.0 C  
**Autoignition Pt:** 524.00 C  
**Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.  
Note: Flammable as diluted in acetonitrile  
**Flammable Properties and Hazards:** Can release vapors that form explosive mixtures at temperatures at or above the flash point.  
Contact with strong oxidizers may cause fire.  
Container explosion may occur under fire conditions.  
Emits toxic and corrosive fumes under fire conditions.  
Flammable liquid.  
Vapors can travel to a source of ignition and flash back.  
**Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.

### 6. Accidental Release Measures

**Steps To Be Taken In Case Material Is Released Or Spilled:** Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).  
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.  
After removal, ventilate contaminated area and flush thoroughly with water.

### 7. Handling and Storage

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.  
**Precautions To Be Taken in Handling:** Avoid breathing (dust, vapor, mist, gas).  
Avoid contact with skin and eyes.  
Avoid prolonged or repeated exposure.  
Do not reuse this container.  
Keep away from sources of ignition.  
Use with adequate ventilation.  
Wash thoroughly after handling.  
**Precautions To Be Taken in Storing:** Store at correct temperature.

### 8. Exposure Controls/Personal Protection

**Protective Equipment Summary - Hazard Label Information:** Eye wash station in work area Lab coat Protective gloves Safety glasses Safety shower  
in work area Vent Hood  
**Respiratory Equipment (Specify Type):** No data available.  
**Eye Protection:** Safety glasses  
**Protective Gloves:** Use appropriate hand protection based on solvent.  
**Other Protective Clothing:** Lab coat  
**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Work/Hygienic/Maintenance Practices:** Do not take internally.  
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.  
Wash thoroughly after handling.

## 9. Physical and Chemical Properties

**Physical States:** [ ] Gas [ X ] Liquid [ ] Solid  
**Melting Point:** No data.  
**Boiling Point:** No data.  
**Specific Gravity (Water = 1):** No data.  
**Vapor Pressure (vs. Air or mm Hg):** 73 MM\_HG at 20.0 C  
**Vapor Density (vs. Air = 1):** No data.  
**Evaporation Rate (vs Butyl Acetate=1):** No data.  
**Solubility in Water:** 0.1 mg/ml\* at 25.0 C  
**Other Solubility Notes:** \*PBS pH 7.2, sol. in EtOH, DMSO, & DMF  
**Percent Volatile:** No data.  
**Formula:** C23H38O7  
**Molecular Weight:** 426.60  
**pH:** No data.  
**Appearance and Odor:** A clear, colorless solution

## 10. Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]  
**Conditions To Avoid - Instability:** sensitive to heat  
protect from ignition sources  
**Incompatibility - Materials To Avoid:** chlorosulfonic acid  
oleum  
oxidizing materials  
n-fluoro compounds  
nitrating agents  
perchlorates  
sulfuric acid  
**Hazardous Decomposition Or Byproducts:** carbon dioxide  
carbon monoxide  
cyanide  
nitrogen oxides  
sulfor oxides  
**Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]  
**Conditions To Avoid - Hazardous Polymerization:** No data available.

## 11. Toxicological Information

**Toxicological Information:** The toxicological effects of this compound have not been thoroughly studied.

Toxicity Data:  
Oral LD50 (rat):2460 mg/kg  
Skin LD50 (rabbit):1250 uL/kg  
Inhalation LD50 (rat):7551 ppm/8H

**Chronic Toxicological Effects:** Investigated as a tumorigen, mutagen, and reproductive effector.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.  
See actual entry in RTECS for complete information.  
Acetonitrile RTECS Number: AL7700000

# MATERIAL SAFETY DATA SHEET

## Prostaglandin D2-1-glyceryl ester

Page: 4  
Printed: 01/31/2005  
Revision: 01/31/2005

**Carcinogenicity/Other Information:** No data available.  
**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### 12. Ecological Information

**Ecological Information:** Runoff from fire control or dilution water may cause pollution.

### 13. Disposal Considerations

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations.

### 14. Transport Information

**LAND TRANSPORT (US DOT)**

**DOT Proper Shipping Name:** Acetonitrile  
**DOT Hazard Class:** 3  
**DOT Hazard Label:** Flammable liquid  
**UN/NA Number:** 1648  
**DOT Packing Group:** II

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

### 15. Regulatory Information

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Prostaglandin D2-1-glyceryl ester	309260-52-4	No	No	No	No
2. Acetonitrile	75-05-8	No	Yes 5000 LB	Yes	No

**US EPA CAA, CWA, TSCA**

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Prostaglandin D2-1-glyceryl ester	309260-52-4	No	No	No	No
2. Acetonitrile	75-05-8	HAP	No	8A PAIR	No

**SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:**

**Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. \* indicates 10000 LB TPQ if not volatile.  
**Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. \*\* indicates statutory RQ.  
**Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.  
**Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

**Other Important Lists:**

**CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical  
**CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant  
**CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)  
**CA PROP 65:** California Proposition 65

**TSCA (Toxic Substances Control Act) Lists:**

**5A(2):** Chemical Subject to Significant New Rules (SNURS)  
**6A:** Commercial Chemical Control Rules  
**8A:** Toxic Substances Subject To Information Rules on Production  
**8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)  
**8A PAIR:** Preliminary Assessment Information Rules - (PAIR)  
**8C:** Records of Allegations of Significant Adverse Reactions  
**8D:** Health and Safety Data Reporting Rules  
**8D TERM:** Health and Safety Data Reporting Rule Terminations

### 16. Other Information

**Company Policy or Disclaimer**

For research use only, not for human or veterinary clinical use.  
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